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Hernia and Arts

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Hernias have been documented in history by ancient artists and physician on drawings, paintings, and sculptures. The most famous but involuntary document with an inguinal hernia is the painting of the Vitruvian Man by Leonardo Da Vinci. The treatment of hernias became a relevant matter of interest for painters in the 16th Century with the famous painting Practica Copiosa of Kaspar David Stromayr. Textbooks of hernia surgery contain a beautiful collection of drawings to explain anatomy and surgical techniques.
The State of the Art in Hernia Surgery has changed over centuries. While watching hernia surgery as an apprentice has been the method of choice for at least 2000 years, books and publications became the usual media for students, residents and surgeons. With the introduction of the internet 4 decades ago the State of the Art in hernia surgery is now documented in presentations with pictures and videos accessible to everybody who is interested mainly patients, students and professionals. To learn the State of the Art training centers and virtual reality have been established in order to facilitate teaching and learning for big groups of physicians.
Martial arts and hernias are a topic of discussion combatants and physicians are not yet familiar with. How much physical stress by martial arts repaired hernias can tolerate and when physical exercise can be restarted after a State of the Art hernia repair with mesh.

AGL2-2

SUTURE LESS "SLIDING MESH TECHNIQUE" IS UNIQUE REALLY "TENSION FREE " TECHNIQUE IN VENTRAL HERNIAS

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The abdominal wall hernias are subject to complex forces that tend to push the bowel uniformly throughout the whole area of the abdominal wall, according to the Law of Pascal: when there is an increase in the pressure at a point of a fluid confined, this increase is also transmitted at every point of the container.
Returning to the concept of described law, it can be said that increasing the volume of the omentum, the thickness of the fat around bowel and the intestinal contents for obesity and overeating, the pressure exerted by them is transmitted with uniform thrust over the entire surface of the abdominal wall. In those cases with scare of abdominal wall after surgery the stiffness of abdominal wall doesn't resist to intrabdominal pressure and it breaks down during efforts.
To protect the abdominal wall by the thrust of the viscera is required plastic surgery with mesh which ensures uniform restraining force distributed over the entire wall. The mesh, according to Ermanno Trabucco's SUTURELESS HERNIOPLASTY, must be free to slide and fit on the muscular wall without fixing means, stitches, clips (SLIDING MESH) in a position of comfort given by equilibrium between intrabdominal pressure and muscles - mesh complex. After a few days the mesh will be incorporated in this position of comfort, without tension, patient's own. SLIDING MESH plasty has the advantage of a complete uniformity of distribution of pressure, and will minimize the risk of recurrence. The author presents many cases of sutureless incisional hernioplasty.

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LAPAROSCOPIC VENTRAL HERNIA REPAIR

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Ventral hernia has variety of clinical characteristic by the size of facial defect, location of hernia, content of hernia, distance to the bone structure and etiology of the hernia. Incisional hernia is the most common type of ventral hernia, results from poor wound healing in a previous surgical incision healing. The prevalence of incisional hernia is 11 to 20% after laparotomy surgery and about 50% develop within the first 2 years.
Laparoscopic repair of ventral hernia become a promising alternative uncomplicated ventral hernia treatment and has gained popularity for its advantages in comparison with open procedure. Reduced incidence of the wound infections, shorter hospital stay and lower recurrence rate become the main superiority.
The principle of the laparoscopic ventral hernia repair technique is tension free repair and proper overlap of the defect. Certain prosthetic mesh placed into the abdominal cavity is the fundamental theory assumption of every laparoscopic ventral hernia repair. Many meshes have been specifically produced to avoid adhesion formation with the abdominal viscera or possibility of recurrence cases and therefore to be implanted intraperitoneally.
However, there are absolute contraindication to perform the laparoscopic surgery and some special condition which need surgeon's consideration for the probability to obtain safe access. Various technique and procedure are available for the surgeon, but the best choice always return to patient-oriented management.

AGL2-4

Ventral Hernia repair: Defects and donuts - the importance of the mesh:defect area ratio

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Aims: Recurrence/pseudo recurrence remains a problem after laparoscopic ventral hernia repair (LVHR). A 5 cm mesh overlap has been suggested as the goal to minimise this, although there is little evidence to support the 5 cm rule.
Methods: In a bridging LVHR, intra-abdominal pressure pushes against the unsupported mesh with a force proportional to the area of the defect. The forces which keep the mesh in place come from mesh fixation and tissue ingrowth - proportional to the area of mesh in contact with the abdominal wall.
Results: When a 2 x 2 cm round VH defect is repaired with a 12 x 12cm mesh, the mesh:defect area ratio (M: DAR) is 36. With a 20 x 20 cm round mesh over a 10 x 10 cm defect, the M: DAR is 4. Despite the same 5cm overlap in both cases, the difference in M: DAR indicates the second mesh has 36/4 = 9x less relative area for ingrowth and is more likely to displace.
Conclusion: As hernia defects get larger, maintaining the M:DAR is more important than a 5 cm overlap. The optimum ratio is not known but around 16, when the mesh is four times the radius of the defect, is likely adequate. This has implications for the maximum defect size that can be repaired laparoscopically.

AGL2-5

Mesh induced visceral complications after IPOM (intraperitoneal onlay mesh) repair for ventral and incisional hernia

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Intraperitoneal onlay mesh (IPOM) repair remain the most commonly performed laparoscopic repair technique for ventral and incisional hernia. The technique involves placing a synthetic mesh in the peritoneal cavity. Although these meshes have undergone special treatment making it "compatible" for intraperitoneal placement, however many have noticed that different patients react differently to these materials and many surgeons now starting to recognize this particular category of complication, namely the mesh induce visceral complications after IPOM technique. We report our experiences in the mesh induced visceral complications after IPOM repair. Together with the analysis from clinical literatures, the safety of IPOM technique with the placement of these meshes in the peritoneal cavity remains a concern among surgeons.

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PPOM - The Pre-peritoneal onlay mesh repair, an alternative laparoscopic approach for ventral and incisional hernia

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Mesh induced visceral complication after IPOM has been reported in many literatures. Despite the special treatment to the synthetic meshes making them more compatible to be placed in the peritoneal cavity, some patients still develop reaction to the mesh leading to major morbidity which could be a major surgical challenge.
The pre-peritoneal onlay mesh repair (PPOM) differs from IPOM in having the mesh place in the pre-peritoneal cavity just like laparoscopic repair for groin hernia. We report our first series of patients with PPOM for their ventral and incisional hernia using this technique.
This technique may be an alternative to IPOM in laparoscopic ventral and incisional hernia repair.

AGL2-7

TAR Technique for Difficult Ventral Hernias-Our Experience

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Ventral hernia repair is one of the commonest surgical procedures done by any general surgeon. Recurrence rate after repair is about 15%. Certain ventral hernias are difficult to repair due to massive size and large defect. Multiple techniques exist for this difficult situation. No one technique is the "best" or "gold standard" for all patients.
TAR- Transverse abdominis Release technique is an extension of Stoppa's repair beyond the rectus sheath laterally and it is a posterior component separation technique.The advantages of TAR are many: it is not limited by the rectus sheath laterally;extensive lateral dissection in the space between transversus muscle and underlying transversalis fascia/peritoneum can be done. Even the defects more than 20 cm can be repaired.
During the year 2015 -16 we have repaired 24 cases of complex hernias by TAR technique. There were 14 females and 10 male patients in the age group 35 to 60 years. The TAR was performed under general anesthesia with epidural analgesia for post operative pain relief. In all the cases we were able to close the abdomen without any tension and there was no post operative respiratory problems. Post operative stay was 5 to 7 days.
For Massive ventral hernia TAR technique appears to be a good option.This technique gives a good abdominal wall reconstruction with a large mesh prosthesis sandwiched in a muscular plane without any tension.

AGL2-8

Tailoring ventral hernia repair & role of component seperation

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Laparoscopic surgery is now being increasingly being done for inguinal hernias due to its advantages of decreased pain and early return to daily activities. Ventral hernias, especially incisional hernias can be challenging to treat due to various factors like obesity, multiple previous surgeries, large defect and loss of domain. There is no standard method of ventral hernia repair. The surgery can be done laparoscopically or in an open fashion. The mesh can be placed in on-lay manner, sublay or intraperitoneal. Nowadays, it is recommended to close the fascial defects prior to placing mesh even in laparoscopic repairs. This can be challenging especially in large defects. Component separation may play an important part in this repair. Ventral hernia needs to be tailored to individual patients.

AGL2-9

Infections in laparoscopic hernia surgery

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Introduction: Infection is the bane of any hernia surgery. It prolongs hospital stay, increases laboratory costs, and usage of antibiotics. It may require additional interventions and minimally invasive surgery may become maximally invasive Surgery. It increases the overall morbidity and mortality of the patient.
Materials and Methods: TEP was done in groin hernias. Polypropylene mesh 15 x 12 cm was used in all cases with 2-point fixation. Dual mesh was used in Ventral hernias with 4 corner suture fixation and the rest by absorbable tackers.
Results: TEP was done in 106 cases of groin hernias operated in last 1 year. There was no incidence of mesh infection in these cases. We treated 5 cases of mesh infection in 5 cases of TEP done for groin hernia outside. Laparoscopic Ventral hernia was done in 102 cases of ventral hernia. We had one mesh infection and treated 3 cases done outside.
Conclusion: All precaution should be taken to prevent mesh infection. Mesh infection usually leads to explantation of mesh converting a minimally invasive procedure to maximally invasive procedure.

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Complications of laparoscopic hernia repair - How to avoid & How to manage

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Complications following laparoscopic hernia surgery is not very common. It may be patient related or procedure related. Many of the complications can be avoided by taking care while performing the procedure. When they do occur per operatively like bleeding, injury to hollow viscus, the surgeon may need to alter the course of the operation and may even end up converting in to open repair. Infection is the main complication during post operative period. It is important to identify those patients who may be at higher risk of developing complications - associated co morbid conditions, large irreducible hernia, so called battlefield abdomen etc.
This paper highlights the incidence, diagnosis and management of the complications with our own experience of more than 100 patients who underwent laparoscopic hernia repair.

AGL2-11

Muscle- aponeurotic plication associated with dermolipectomy in the treatment of ventral hernias and recti diastasis A functional and aesthetic approach

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The author presents more than 30 years of experience in treating small, median and large size abdominal wall deformities like hernias -ventral, incisional, umbilical and rectus diastasis, using open methods for muscle aponeurotic rectus plication associated with abdominal dermolipectomy in different versions like lower transverse excision and vertical dermolipectomy.
With a representative number of patients up to 20 years follow-up presenting with successful results and a series of secondary surgeries repairing unsuccessful cases, the author presents an in-dept. study of his personal experience as well as a bibliography review of the different stitching methods of plication, with the use of different sutures material, and the long term evaluation of the efficacy and longevity of the muscle-aponeurotic plication by abdominal wall CT scan and linear ultrasound.
With an analysis of the trans-operative findings in secondary cases, his conclusion of what was the reason for failure and what should be the ideal material and method for muscle aponeurotic abdominal wall plication is discussed.

AGL2-12

Laparoscopic repair of paraesophageal hernia: tips and tricks

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Over the past two decades laparoscopic repair is increasingly becoming the gold standard in the management of paraesophageal hernias (PEH). The operation, however, remains a challenging one to perform as it is often performed in frail, elderly patients, the anatomy is invariably distorted and may be difficult to appreciate, a large sac needs to be dealt with, a shortened esophagus may be encountered and closure of a wide hiatus may pose problems. This presentation highlights tips and tricks the surgeon must use to deal with a) the contents (which are often intrathoracic, b) the sac, c) the esophagus, d) the hiatus and e) the stomach.
The contents need careful handling and reduction with the help of delicate instruments. The sac must be separated by means of a circumferential incision around the hiatus, dissected from the mediastinal structures, everted and excised. Extensive esophageal mobilization to ensure at least a 3cm intra-abdominal length is required and special strategies must be employed to deal with a shortened esophagus. The hiatus is closed with non-absorbable sutures and may require reinforcement with prosthetic material; however, the latter remains a controversial issue. A fundoplication is usually fashioned but alternatives to retain the stomach intra-abdominally include an anterior gastropexy or placement of a gastrostomy tube.
It has been shown that one of the most important factors determining successful outcome of a laparoscopic repair of a PEH is surgeon experience, and this remains an operation to be undertaken only by experienced laparoscopic surgeons.

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Hernias in rural Nepal: an exclusive pictorial review

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Background: Ventral and groin hernias are quite common and may be simple to treat. However, in Nepal where resources are limited and to those living in Himalayas; as they walk for three, four days to reach the nearest health care center, by the time they reach it gets ruptured, strangulated or obstructed. Due to illiteracy, low income and ignorance some have huge hernias and few even develop a faecal fistula due to inadvertent injury while working. We present a pictorial review of all the external or internal hernias with a wide range of strange manifestations, which were quite unique in their own perspective.
Objectives: To present a pictorial assay of different hernias and their complcations
Analyze the risk factors
Results: The three-year study had 63 patients;53 (84.1%) males and 10 (15.8%) females. The average age was 49.23+/-21.4 years (range 10 days-85 years). The average duration of hernia was 6.36+/-4.57 years (range 5 hours-30 years). The median duration of complications was 4 days (range 5 hours-15 years). There were 7(11.11%) mortalities. The morbidity rate was (n 21) 33.33% and the risk factors identified for mortality were: age >65 years (p0.004), inguinal hernias (p<0.001), presence of co-morbid diseases (p<0.001), strangulation (p0.007), bowel resection (p<0.001); and for morbidities:type of hernia (p<0.001), presence of a comorbid diseases (p0.013), and bowel resection (p0.002)
Conclusion: Elderly males with comorbids were at risk. Health education, awareness may help reduce complications, mortality.

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LVHR vs PCS-TAR for central abdominal hernias. Small series from India

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Introduction: Laparoscopic ventral hernia repair has been accepted as a good procedure. Long term results show an increasing number of recurrences. With larger hernias, there is little improvement in abdominal shape. Some patients also complain of lack of functional benefits. Of late, we have seen component separation as an alternative treatment. Anterior component separation did not give very good results but results of posterior component separation with transversus abdominis release addresses the problem of shape and function regain.
Material and Methods: Between Jan 2015 and Dec 2016, we have done 45 central abdominal ventral hernia repairs with a follow up of over 9 months. Patients were given the choice of LVHR and PCS-TAR. There were 24 and 21 cases respectively. Laparoscopic repair involved adhesiolysis, placement of dual mesh, fixation with mechanical fixator device along with transfacial corner suturing. Open PCS-TAR involved excision of redundant skin and sac, creation of space between transversus and internal oblique, placement of large mesh followed by layered closure.
Results: Duration of surgery, hospital stay, post operative pain, return to work, seroma formation, infection, satisfaction with shape, functional recovery and recurrence were compared within the two groups. There was higher recurrence rate in the LVHR group. Operative time, seroma formation and satisfaction with shape was more in the PCR-TAR group.
Conclusion: Results of defects smaller than 5 cm were comparable. For large ventral hernias with loss of domain/ shape, PCS- TAR is an acceptable option and may give better results than LVHR.